Compatibility Determination

Station Name: Chincoteague NWR **Date Established:** May 13, 1943

Establishing Authority:

1. Migratory Bird Conservation Act
2. Refuge Recreation Act
3. Emergency Wetlands Resources Act

Purpose(s) for which Established:

1. For use as an inviolate sanctuary, or for any other management purpose for migratory birds.
2. Suitable for (1) incidental fish and wildlife oriented recreational development (2) the protection of natural resources (3) the conservation of endangered species or threatened species.
3. The conservation of Wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions.

Description of Proposed Use: Commercial Filming/Motion Picture Production (Educational Films and Photography Workshop)

Production of educational films and the conducting of photography workshops on the refuge occur very infrequently. During the period 1990 - 1993 a total of seven permits were issued for the production of films and four permits to conduct a photography workshop. The general use of the refuge for photography is covered in the 1992 Final Environmental Impact Statement for the Chincoteague National Wildlife Refuge Master Plan and the 1993 Chincoteague National Wildlife Refuge Master Plan.

This type of filming can take place in a variety of refuge habitats and at varying times of the year, depending on the objectives of the project. The majority of the filming is conducted for educational and promotional purposes. Productions usually involve from two to five people. Photographic workshops usually involve approximately 10 - 20 participants and an instructor. The emphasis is placed on wildlife and scenic photography.

Anticipated Impacts on Refuge Purpose(s):

Because of the unpredictability of this activity, such as the number of requests, time of year, and locations on the refuge, impacts to migratory birds must be generalized and certainly could be similar to potential disturbance from photographic workshops which usually are conducted adjacent to some refuge impoundments. Conflicts arise when migratory birds and humans are present in the same areas (Boyle and Samson 1985). Response of wildlife to human activities includes: departure from site (Owen 1973, Burger 1981, Kaiser and Fritzell 1984, Korschgen et al. 1985, Henson and Grant 1991, Kahl 1991, Klein 1993), use of sub-optimal habitat (Erwin 1980, Williams and Forbes 1980), altered behavior (Burger 1981, Korschgen et al. 1985, Morton et al. 1989, Ward and Stehn 1989, Havera et al. 1992, Klein 1993), and an increase in energy expenditure (Morton et al. 1989, Belanger and Bedard 1990). Altered behavior that increases energy expenditure, can cause a decline in body condition (Morton et al. 1989, Belanger and Bedard 1990, Morton 1991). Waterfowl in poor condition experienced higher mortality rates (Haramis et al. 1986, Hepp et al. 1986). Body condition and lipid reserves during winter and spring migration can affect reproductive success of waterfowl (Ankney and MacInnes 1978, Raveling 1979, Krapu 1981).

On Back Bay NWR Laskowski et al. (1993), studied behavior of snowy egrets, female mallards, and greater yellowlegs within 91.4 meters of impoundment dikes used by the general public. Behavior of snowy egrets was recorded during August and September 1992 to represent post-breeding marsh and wading birds. Mallards were monitored during migration (November 1992) and during the winter January (1993). Greater yellowlegs' behavior was observed during the northward shorebird migration (May 1993). Behavior was monitored during the typical public activities of walking, bicycling, and driving a vehicle past the sample sites.

The study found that snowy egret resting behavior decreased and alert behavior increased in the presence of humans. Preening decreased when humans were present, but this change was not significant. Feeding, walk/swim, and flight behaviors were not related to human presence. Female mallards in November increased feeding, preening and alert behaviors in the presence of humans. Resting, walk/swim, and flight behavior were not influenced by human presence. In January, female mallard resting and preening behavior were not influenced by the presence of humans. However, feeding, alert, walk/swim, and flight behaviors were related to human presence. Greater yellowlegs increased alert behavior in the presence of humans. No other behaviors were affected. Maintenance behavior(combined feeding, resting, and preening) decreased when humans were present for all study species. In addition, this decrease was accompanied by an increase in escape behavior by each species. Maintenance behavior of mallards in January decreased in the presence of vehicles and combined disturbance. Escape behavior increased when vehicles were present. Maintenance behavior of greater yellowlegs declined when bicycles and vehicles were present but was not influenced by pedestrian presence. The presence of bicycles and vehicles increased escape behavior. Snowy egrets and female mallards increased movement between subplots and to areas within the study area but further from the disturbance.

Similar types of disturbance may occur on Chincoteague NWR when filming and/or photographic workshops occur along dikes and adjacent to refuge impoundments. The

degree of disturbance will depend on the time of year. See appended data sheets for specific peak monthly migratory bird populations. Due to the infrequency of these uses and restrictions placed on them, disturbance is expected to be minimal.

Determination: (Check One)

This use is compatible __X__ This use is not compatible _____

The following stipulations are required to ensure compatibility:

All conditions found in the Commercial Audio-Visual Production Application will apply (8RM16 Exhibit 2 attached) to filming permittees.

Conducting these activities in areas not normally open to the public will be coordinated with refuge staff in advance, to lessen impacts to all wildlife.

These activities will be prohibited in areas deemed the most critical for migratory birds depending on the season.

Justification:

These uses are very low impact, low cost, and highly controllable. Since only small areas of the refuge are impacted by these activities, migratory birds, if disturbed, can find suitable habitat on other parts of the refuge. The educational value of these filming productions is very high. Many are marketed through public broadcasting stations reaching a broad spectrum and large number of potential customers. Photographic workshops increase the interest in wildlife resources and the awareness for the benefits of national wildlife refuges. These uses qualify as Categorical Exclusions from 516 DM 6 Appendix 1, A(2) - personnel training, environmental interpretation, public safety efforts and other educational activities; and C4 - the issuance or reissuance of special use permits that result in no or negligible environmental disturbance.

Prepared By: **John D. Schroer, Refuge Manager June 30, 1994**
(Name/Title/Signature/Date)

Reviewed By:_____
(Name/Title/Signature/Date)

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(Name/Title/Signature/Date)

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